

REMARKS

By this Amendment, claims 1-3, 5-8, 10-13 and 15-20 are amended to merely clarify the recited subject matter and a second substitute specification is submitted to correct the informalities noted by the outstanding Office Action. Claims 1-20 are pending.

The objection to claims 1 and 12 is overcome by the submitted amendments.

Claims 1-7, 12, 14 and 16-18 were rejected under 35 U.S.C. 102(a) as being anticipated by Salmela et al. (WO 98/30056; hereafter "Salmela"), claims 8, 10, 11, 13 and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Salmela, Nordstrand et al. (U.S. 6,334,052; hereafter "Nordstrand"), and Seppanen et al. (U.S. 5,903,832; hereafter "Seppanen"), and claims 19 and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nordstrand and Seppanen.

Applicants traverse the prior art rejections because the cited prior art, analyzed individually or in combination, fails to disclose, teach or suggest the claimed method (independent claims 1 and 10), network (independent claim 12), network element (independent claim 16) and mobile station (independent claim 19) wherein a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system comprising location areas each associated with a respective Location Area Code (LAC), wherein within each location area, the mobile station may move without updating its location, wherein some of the location areas are defined to be exclusive location areas each associated with a respective LAC, an exclusive location area comprising exclusive cells for which an exclusive service condition is defined and, wherein, a request for location update, received via a cell, initiates a location update procedure for updating the subscriber's location to a new location area and includes a new LAC for the location area to which the subscriber would like to update; and during a location update procedure, a check is performed whether the new location area indicated by the LAC is defined as an exclusive location area.

As explained previously, Salmela merely discloses a solution for providing localized services in cellular systems. In Salmela, location areas form regions within each of which the mobile station may roam freely without notifying the visiting location register. Additionally, Salmela discloses that a list of special cells may be defined for a subscriber. The cells in this list form a subscriber-specific localized service area that is, by definition, specific to the subscriber. That list of special cells may be utilized to control the operation of the mobile station used by the subscriber. Salmela also discusses several types of special cells, and mentions also control operations restricting the access of the mobile station to some cells.

However, Salmela fails to disclose, teach or suggest defining some of the location areas to be exclusive location areas each associated with a respective Location Area Code (LAC), an exclusive location area including exclusive cells for which an exclusive service condition is defined. The Office Action referred to the localized service areas of Salmela, which are defined as a list of special cells drawn up for a subscriber (for example, page 4, lines 9-10, and 15-16, and page 5, lines 15-16, and page 15, lines 26-33). Thus, the definition is made for a subscriber or a subscriber group (page 15, lines 26-28), not for a location area of the network subsystem. A special cell of a location area may then naturally exist in a special service area; however, in Salmela, the other cells with the same location area identifier may or may not belong to the special service area. Thus, a subscriber roaming within a location area may try to camp in special cells and non-special cells without having a trigger to update its location.

Moreover, Salmela fails to disclose, teach or suggest checking, during a location update procedure, whether a new location area indicated by the LAC is defined as an exclusive location area. Since no exclusive location areas are defined, such checking is neither discussed nor suggested in Salmela. In fact, the only action implemented during the location update procedure in Salmela is delivery of the list of special cells to the mobile station, which is clearly not the same as the action implemented during the claimed location update procedure. Simply put, delivery of a list of special cells does not correspond with checking a location area type.

Although Salmela does disclose a checking operation, it occurs at a different stage, i.e., when the mobile station receives a new broadcast cell identifier. The checking is also implemented differently: the mobile station checks whether the new cell is in its own list of special cells. Thus, checking a cell identifier does not correspond with checking a location area.

Additionally, Salmela fails to disclose or suggest using an exclusive service condition of a cell in determining whether or not the subscriber is allowed to camp in the cell. To the contrary, in Salmela, any control operations restricting the user's ability to camp in the cell are made based on a list of cells of a subscriber, not on an exclusive service condition that is defined for a particular cell and governing operations of that cell. A cell identifier itself does not relate to any particular service, and a list cell identifiers of a subscriber is clearly not the same as exclusive service condition of a cell.

Thus, Salmela fails to teach defining exclusive location areas, and the checking relating to them during location update, and therefore claims 1-7, 12, 14 and 16-18 are patentable over Salmela. Claims 8, 9, 13 and 15 are, as a consequence, patentable since the claims they depend on, are patentable.

With reference also to claims 10 and 19, Salmela also fails to disclose broadcasting an indication indicating that the cell is an exclusive cell that belongs to an exclusive location area. Salmela merely discloses that a base transceiver station may broadcast some cell-specific information, for example a cell identifier or a message indicating that the cell provides a certain special service for the mobile stations in the network. However, since no exclusive location areas are defined, and cells of one location area may be exclusive or non-exclusive, such a message does not give any indication on whether the cell belongs to an exclusive location area.

The Office Action has recognized that Salmela fails to teach or suggest determining the possibility of camping in a mobile station and camping measurements being taken after that. However, the Office Action asserted that Nordstrand remedies this deficiency. However, Nordstrand fails to teach or suggest the concept of exclusive location areas. Additionally Nordstrand fails to disclose sending a location update request if camping is allowed, after the mobile station has determined whether camping is allowed. In Nordstrand, the cell broadcasts an "exclusive access" indicator. By using their specific subscriber-based information some mobile stations may then ignore a "cell barred" indicator, and proceed with the cell re-selection procedure.

However, for one of ordinary skill in the art, cell re-selection relates to movement of a mobile station from one cell area to another, and it may lead to changeover, handover, or location updating. Nevertheless, the decision to continue cell re-selection procedure clearly does not correspond with sending a location update procedure.

Thus, in Nordstrand, a location update may or may not take place after a detected "cell barred" indicator, disregarding the check whether the camping to the particular cell is allowed or not

As asserted previously, Seppanen merely discloses that a mobile terminal searches for a suitable network and if a suitable network is not found, enters the limited service state. However, a suitable network is not the same as a suitable cell. Thus, Seppanen fails to disclose that if a suitable cell is not found, the mobile terminal enters the limited service state.

Moreover, because Nordstrand teaches continuing the cell selection/re-selection process during the location update (see, Nordstrand, Figures 4 and 5) if a suitable cell is not found, a system resulting from the combined teachings of Nordstrand and Seppanen would merely provide a solution in which, if a suitable network is not found, the mobile station enters the limited service state but if a suitable network is found, the mobile terminal tries to find a suitable cell, and if a suitable cell is not found, the mobile terminal continues the cell selection/reselection process. That operation is contrary to the invention recited in claims 10 and 19.

Moreover, Salmela teaches either to select one of the permitted cells or to connect to one of the forbidden cells, if it cannot otherwise receive network services (Salmela, page 14, lines 15-20). Therefore, by combining Seppanen with Salmela, one skilled in the art would merely provide a solution in which, if a suitable network is not initially found, the mobile station enters the limited service state, but if a suitable network has been found, the mobile terminal tries to find a suitable cell, and if a suitable cell is not found, instead of entering a limited service state, the mobile station would camp to an exclusive cell. Another possible solution based on the combined teachings would have been that, if a suitable network is not found, then the mobile station camps in a non-suitable network. However, that too is contrary to what is claimed in claims 10 and 19. Therefore, claims 10 and 19 and their respective dependent claims are patentable over Salmela in view of Nordstrand and in view of Seppanen.

All objections and rejections having been addressed, Applicants request that the Examiner issue a Notice of Allowance indicating the allowability of all of the pending claims. However, if anything further is necessary to place the application in condition for immediate allowance, Applicants request that the Examiner telephone Applicants' undersigned representative at the number listed below.

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Respectfully submitted,

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